



*Simply Moving*

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## **User Manual**

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# Simply Moving

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Dear Customer,

Thank you for your purchase of your eZeebike. You're a step closer to a great way of getting around that's fast, fun and friendly to the environment.

Using a technology called Pulse Wave Modulation control, our brushless hub motors do not wear out like regular DC motors. Planetary reduction gears fitted in the hub gives our motor a powerful torque. Combined with your pedalling, eZeebikes flatten out those hills and overcome headwinds with a breeze.

Under normal cruising conditions (15 km/h), the motor draws ~5 amps at 150W, a torque of 5 Nm and an efficiency of ~ 83%. At 20 km/h, its power consumption is 1 kWh for 100 kms. Your ride is efficient and lots of fun!

While our pledge to quality means our components are high value and reliable. It's your part to understand the safety implications and the possible risks of cycling. So take some time and read this manual. It explains the bike in detail, how to take care of it, so that you can enjoy using the bike for years to come.

WW Ching  
Chief eZee Officer



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# Legal Regulations

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EU regulations state that your vehicle is an Electric Powered Assist Cycle (EPAC) when the following conditions are met, and is now governed by the latest European regulation EN15194:2009 for EU. [ EU directive 2002/24/EC Chapter 1 Article 1 (h) ]

"Cycles with pedal assistance which are equipped with an auxiliary electric motor having a maximum continuous rated power of 0.25 kW, of which the output is progressively reduced and finally cut off as the vehicle reaches a speed of 25 km/h or if the cyclist stops pedaling."

Conforming to EN reg., the power assist of an eZeebike only functions while the rider is pedalling. The means of controlling the power level of the assistance adjusted by the power setting from the console or throttle.

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In USA it is governed by Consumer Product Safety Commission 16 CFR Part 1512 requirements for low speed electric bicycles.

USA regulations allow an ebike throttled maximum speed of 20 mph. eZee bike made for the USA has a motor nominally rated at 500 watts. For markets that are not subject to EN reg. the bike comes with default mode that allows PAS or ebike mode simultaneously.

Electric bicycles does not require a license or moped certificate, there is no age limit and you can take cycling paths. It conforms to regulations of normal bicycles. Legal requirements concerning insurance of your bicycle may differ, so do find out about the rules and regulations in your country.

# Technical Data



EC Declaration of conformity 2013  
(Only applicable to models requiring registration)

The manufacturer Shanghai eZee Kinetics Technology Co. Ltd  
259 Feng Yong Road, Feng Xian,  
Shanghai, People's Republic of China  
Telephone +86 (0)21 5756 6097

herby declares that the following products:

Product name: eZee electric bike  
Type names: Sprint, Bolt, Forza, Torq, Cadence, Street, Quando, Expedir, Carro  
Year of manufacture: 2013 / 2014

are in accordance with:

EN 15194: Electrically Power Assist Cycles (EPAC), with the inclusion of conformity for Electro Magnetic Compatibility.

EN 14764: City and Trekking cycles - Safety requirement and test methods.

EC and UL certified charger.

Technical documentation is available upon request.

On behalf of Shanghai eZee Kinetics Technology Co. Ltd:

Ching Wai Won  
CEO, Managing Director

Motor	DC brushless hub motor with planetary reduction gears  Nominally Rated - 250W (EU) Nominally Rated - 500W (US)
Battery	Lithium Ion with battery management circuit  36V 11Ah (370 Wh) 36V 15Ah (540 Wh) 36V 21Ah (756 Wh) 36V 28Ah (1000 Wh) Low voltage protection 28 V  Discharge temperature limit -15°C to +55°C
Controller	PWM LED self diagnostic system Overload protection 20 amps Thermal protection Short circuit protection
Charger	4 amps Charge time 4 hrs for 15Ah Charging temperature +5°C +35°C
Interface	Forward magnetic motion sensor 12 pole and dual hall 5 levels Power and speeds settings and or throttle application. 5 levels battery gauge
Fuse	30 amps



# Warranty Conditions

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The following guarantee conditions complement your legal rights.

## How the guarantee applies:

We guarantee against material or construction defects under the following conditions.

- Proof of purchase. The guarantee starts on the date of purchase.
- Only the first owner is entitled to the guarantee.
- Guarantee applies to the frame, fork, all mechanical and electrical parts, excl. wear and tear items.
- Battery warranty up to 70% DOD from its original capacity.

## How the guarantee does not apply

- When the bicycle is used negligently or damage due to accident.
- Damage ascribed to normal wear and tear.
- Poor maintenance, or modifications that no longer complies with regulations or original technical specifications.
- Damage due to external causes.
- The bicycle is put up for hire or commercial use.
- The battery pack is used incorrectly or tempered with.
- Compensatory costs arising from damages or accidents, or cost incurred by loss of the bicycle's usage.

## How the guarantee covers

- Original defective parts returned for assessment will be replaced by the same or equal value part.
- Labour and transportation or all other charges are not included.
- eZee exclusively makes the decision whether or not the guarantee applies.

# Assembly

## Unpack

Carefully remove the bicycle by lifting it straight out of the box (beware of the carton staples.) Remove packing material around the bike and stand the bike on a clean flat surface. Be sure to keep any part packages. Discard box and packaging material only.

Dispose responsibly, recycle when possible.

## Checklist

This box should contain...the eZeebike!

An accessory box containing.

- a. 3 Ignition keys
- b. 1 Pair of pedals
- c. 1 Battery charger
- d. 1 Power cord
- e. 2 Fuses (30 amps)
- f. Nylon ties
- g. Heat shrink tubes (assorted pre-cut sizes)
- h. 1 Hex Key #5
- i. 1 Hex Key #3
- j. 1 eZeebike User manual
- k. Bike component manuals
- j. 1 Battery

## Tools required

Tools are the first step to proper assembly, you will need  
Allen / Hex key metric set  
Philips head screwdriver  
Open-end flat wrenches metric measurements 6mm - 17mm

## Front wheel

Insert the hub motor wheel into the fork, ensure it is snugly fitted in the dropout slots. Tighten nuts on both sides till the wheel is secured. Tightening torque 35 Nm

## Seat post

Insert into the seat tube and align. Tighten clamps and ensure seat is firmly fastened. Tightening torque 16 Nm

Do not adjust the seat post beyond its maximum extension mark.

## Front Mudguard

The supports are attached to the sides and top of the front fork, the mudguards are made of polycarbonate and should not rattle when securely fastened.

## Brakes

One of the most important safety features on the bicycle. To minimize the risk of injury, ensure they are corrected adjusted.  
Ensure that the brakes are centered and that the wheel spins freely when brakes are not applied.  
If you have little experience with bicycle maintenance. We recommend you get this done with your local bike shop.

## Accessories

Install any optional accessories you have purchased with your bike. Read the manufacturer's manual provided.

## Battery

Insert key into keyhole located by the controller box and turn key counter clockwise while pressing it in, so that it arrives in the open position. Release the catch located at the underside of the saddle to flip it over. Locate the battery flanges in their slots in the battery holder; then push the battery firmly into the holder until the connecting pins are firmly in the battery sockets.

The fit can be tight when new, so it may be required to apply gentle pressure. Once the battery is in position, lock into place by turning the key one click clockwise to the "OFF" position. Ensure that the key is in "OFF" position until you are ready to ride.

Do not use excessive force to fit the battery, which could result in damaging the connection sockets or pins.

If there is an A/C outlet near to where your bicycle is parked. It may not be necessary to remove the battery from the bicycle to charge.

## Tyres

Ensure that the tyres are inflated to the correct pressure of 45- 60 psi. Well inflated tyres enhances the comfort, safety and efficiency of your ride. Do not make max. inflation of 75 psi, it makes an uncomfortable ride. Check recommended inflation pressure as marked on the tyres.



# Checklist

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## Usage

The eZeebike is best described as a city / trekking bike and is best suited for usage in urban environment and roads. While cycling, it is your responsibility to be attentive of your environment and traffic rules, as this concerns the safety of all who share the paths, especially you.

Wear shoes that stay on your feet and grip firmly to the pedals. No barefoot or sandals.

Dress to be visible on the road and avoid loose clothes that will tangle with moving parts of the bicycle.

Keep your speed at levels appropriate to road conditions

Be aware of wet weather conditions, as these affect braking distance.

Brake earlier than you normally would on dry roads.

Familiarise with the traffic rules in the country you are riding in.

Avoid cycling in poor weather and visibility conditions such as fog, night, heavy rain and snow. Keep your lights on in such conditions.

Familiarise yourself with the usage of the bike and how to maintain it.

## Inspect

Before every ride, make a quick inspection of your bike's mechanical and electronic features. Be safe, not sorry.

### Frame & fork

Visually check for damage, do not ride if bent or fractured.

### Wheels and Tyres

Check for missing or damage spokes. Feel spokes to ensure tightness, wheels should be true (straight) and tyres inflated to its correct pressure.

### Handlebar and stem

Tightened firmly in the 'face forward' positions, the handlebars will rotate the front fork and wheel, ensure that the grips are also firmly seated.

### Brakes

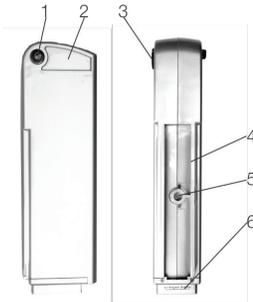
Check brake functions on both front and rear brakes.

Brake cables should remain unobstructed by other cables or accessories.

### Chain

Turn crank arms to ensure chain runs smoothly. Keep the chain lubricated and clean. Chain tension may need adjustment or tightening if it is without sufficient tension.

# Battery Charging



1. Fuse / Fuse holder (30 amps)
2. Battery grip
3. Charging socket
4. Battery slot guides
5. Battery lock slot
6. Serial number / information



- |                           |                        |                       |
|---------------------------|------------------------|-----------------------|
| a. Male charging plug     | e. Cooling fan         | i. Warning label      |
| b. Charging cord          | f. Fuse 10 Amps        | j. Power switch       |
| c. Charger specifications | g. Charger 'ON' LED    | k. A/C voltage switch |
| d. Charger serial no.     | h. Charging status LED | l. Power cord socket  |

Before your first ride, the battery needs charging. Bring it to a wall socket. (220V - 230V AC EU / 115V AC US)

Insert charging plug into socket on battery and connect charger power cord to A/C outlet. Turn on A/C outlet. Turn the 'I' switch on the charger.

Do not remove the plug by pulling the cord, always grip the charging port by its metal body.

Check the indicator lights on the front of the charger.

**RED** indicates that the charger is connected and running from an A/C outlet.

**YELLOW** indicates that the battery is charging

**GREEN** indicates that the battery is fully charged

It will take 4 hours to fully charge a 14Ah battery. You may interrupt the charging at any time.



# Battery Charging

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As Li Ion batteries do not suffer from memory effect, it is not required for the battery to be empty to commence a recharge.

Top-up charging everytime you've completed your cycle ride is recommended.

Kept in good condition Li Ion battery will perform at least 350 full charge cycles, with a retention of 70% from its original capacity.

Please use only the Li ion charger as provided.

Sometimes after temporary disconnection, the charging status light may give a false green reading. To verify that your battery is fully charged, switch the charger off, wait for the charger lights to go out and switch it back on again. When the battery is fully charged, the charging status light should quickly return from amber to green,

The battery may be also charged on the bicycle, do make sure that the bicycle is switched off when charging.

If the battery refuses to accept a charge, refer to your eZee dealer for more information.

Battery charging is automatically regulated, there is no danger of overcharging. However, we strongly advise that you disconnect the battery and switch the charger off when the charging process is completed, and not to leave it on unattended.

Do not charge the battery in wet conditions.

Never allow children to play with the battery or charger.

Do not leave your battery in a fully discharge state for long periods of time. The battery will continue to self-discharge, resulting in damage.

# Display console

## Power On

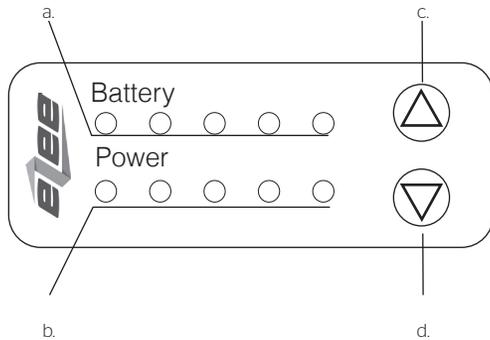
When the electric bike is switched on, the display will boot, lighting all the LED lights for 2 seconds before entering normal operation.

## Basic Operation

Power level in blue LED shows the level of electric assistance in pedelec or power assist mode.

There are 5 levels of assistance and power off when all the blue LED lights are off.

At least one blue LED must be on to have any power on (e.g. activating the throttle)



- a. Battery level Gauge (2 Green, 2 Orange, 1 Red)
- b. Power Assist Level / Mode Selection Indicator (5 Blue)
- c. "Up" button
- d. "Down" button

## Setup Menu

Hold the  button for 5 seconds to enter setup menu.

Use  or  button to select the appropriate settings. In menu setup, hold the 'Down' button for about 3 seconds to save.

## Mode Selection

**Mode 1:** (Default) Pedelec / EBike (US): Power Led Bar shows the assist power level. When throttling, it switches to EBike mode.

**Mode 2:** Pedelec (EU): Power Led Bar shows the assist power level. Throttling will be in 6km EBike mode.

**Mode 3:** Option for BB torque sensor with proportional 5 power levels.

**Mode 4:** Pedelec: Responds to throttle / assist level. Power LED Bar shows the current (amps) level.

**Mode 5:** EBike (Cruise): Responds to throttle (from gauge). Power LED Bar shows the current (amps) level. 'Up' button set cruise. E-Brakes deactivate cruise.

The bike will come set up with the mode according to your country legal requirement. Any changes are made may affect the legal status of your bike.



# How eZeebike works

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## Your first ride

Before you wheel your bike out into the world, we recommend you practice handling the bike in a safe area away from obstructions and traffic. The motor may look small, but it's powerful! You'll be riding faster than you think.

Turn the key to the 'ON' position. A red LED will illuminate below the key socket. If the light flashes, read the Troubleshooting section of this manual. If it shines steadily, you're ready for the next step.

## EPAC / Pedelec

As you pedal, rotation on the crank is picked up by a sensor in the bottom bracket. This allows the drive system to be engaged. There are 5 levels of speed/power selection on the console.

## E-Bike

The motor runs as soon as you turn the throttle. Ensure that you are seated and ready to ride off before you use the throttle.

In E-bike mode, the range of your bike will be approximately 40 kms (25 miles) with a 10ah battery. The hillier the terrain, the less you pedal, shortens your range. While EPAC, judicious use of gears, power assistance all contributes to increasing the mileage you can get out of your ride to about 60 kms (40 miles).

You can always choose to ride your bicycle as an ordinary push bicycle.

## Battery power consumption

With a fully charged bicycle, the battery level gauge shows 'green'. As you cycle, the battery power drops and the gauge will show the state of charge remaining. When it remains on 'amber' and dips into 'red', you have approximately 20% of the charge left. Best to recharge the battery soon.

Continued use of an empty battery by 'pulsing' will cause deep discharge, this is detrimental to the battery and reduces its lifespan.

## Lighting system

Front and rear LED lights are powered by the main battery.

## Lock

Turning the key to the 'OFF' position and removing it will shut the system off and lock the battery in place. Use a chain lock to further secure your bicycle.

## Central support stand

This stand supports your bike straight up. Use your feet to depress the stand downwards and pull the bike in reverse. Do not sit on the bike with the stand parked.

## Luggage rack

If you plan to carry luggage on the rear, make sure everything is securely fastened and clear from the rear wheel. Do however, take note that the load limit is 25 kgs.

# Maintenance

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Maintaining your bicycle ensures you'll get the most out of every ride and out of the entire life of your eZee bike. How much of your bike's maintenance you can do yourself will depend on your knowledge, skill, experience and whether you have the necessary tools for the job.

Learning from available cycling literature and joining cycling communities can be an enjoyable way of improving your skill and knowledge about maintaining bicycles. Beyond this manual, it is good to consult your LBS and eZee dealer for advice regularly.

## **Before every ride**

Mechanical safety checks, use a fully charged battery, visual inspection for damages.

## **Every 150kms (100 miles)**

Clean the bike, incl. chain rings and sprocket. Clean and lightly oil the chain and gears.

## **Every 20 - 30 hours of riding**

Squeeze the brakes and rock the bike to check for any looseness with each forward or backward movement. If the headset is loose, have your dealer check it.

Lift the front wheel and rotate handlebars to check for tightness of steering, it may be necessary to lubricate ball bearings.

Check and recalibrate the brakes, replace if worn out.

## **Every 20 - 30 hours of riding (continued)**

Squeeze spokes in adjoining pairs between your thumb and index finger. They all should have the same tension. Have your dealer respoke or true the wheel if necessary.

Check cables for rust, kinks and fraying, have your dealer replace them if necessary.

## **Repairing a punctured tyre.**

If you have a punctured tyre, we recommend that you get a specialist to carry out the repairs. You can always of course consult a specialist and carry out the repairs on your own.

## **Changing Tyres on hub motor wheel**

With the hub motor wheel, there are additional steps in the case you require the entire wheel to be removed from the bike. A philips head screwdriver will be required to open the cable housing (shown on left) to first unplug the wires than run from the motor to controller. Unplug these before proceeding to remove the front wheel. Be mindful of the tightening assembly sequence of washers, nuts and spacers.

## **Hub motor and general inspection**

After 5,000 kms (3,000 miles) of cycling. We recommend you arrange to have a thorough inspection of your bicycle by an eZee dealer.



# Afterword

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At eZee, our mission is simple - continue to make the best electric bikes and offer exceptional service. We're constantly on the lookout for ways to improve our bikes and apply solutions to our bikes to enrich lives everywhere.

We would like to invite you to join our eZeebike community to discover the latest news and happenings in the world of electric bikes. Participate in our events and competitions and help spread the word on the street that the new cycling revolution has arrived.

We want to get to know and thank everyone of you. If you have anything to ask, to comment or suggest; perhaps you have an idea, a project to discuss, or simply would like share your stories and photos with us. Contact us directly, we want to hear from you!

Here's wishing you, safe, happy and eZee riding!



<http://www.facebook.com/Ezeebikes>



[www.ezeebike.com](http://www.ezeebike.com)



# Reference

## **Proof of purchase**

Keep your proof of purchase with vendor's receipt, with the date of purchase clearly marked.

3 Ignition / lock keys comes with the bike, please keep 2 keys in a place where you could remember where it is. Use only one key at a time.

## **Serial Numbers**

Record the serial numbers found on your motor, frame, controller, charger and battery here for reference. These are important data for us to understand and troubleshoot your eZeebike.

## **Dealer Information**

Customer Name :

Contact Details :

Motor s/no. :

Charger s/no. :

Controller s/no. :

Battery serial no. :

Frame no. :

Ignition key no. :

# Dealer Copy

Customer Name :

Contact Details :

Motor s/no. :

Charger s/no. :

Controller s/no. :

Battery serial no. :

Frame no. :

Ignition key no. :

